Soyoung Jeon

CONTACT INFORMATION

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EDUCATION

University of North Carolina at Chapel Hill

Ph.D. in Statistics and Operations Research, May 2012

- Thesis Title: *Max-stable Processes for Threshold Exceedances in Spatial Extremes*
- Advisor: Professor Richard L. Smith

Seoul National University, Korea

M.S. in Statistics, Feb. 2007

- Thesis Title: *A Study on the Performance of Bandwidth Selectors in Local Polynomial Regression*
- Advisor: Professor Woochul Kim

B.S. in Statistics, Feb. 2005

RESEARCH EXPERIENCE

Lawrence Berkeley National Laboratory, Berkeley, CA

Postdoctoral Researcher **September 2012 to present**

In the Statistical Frameworks Team under CASCADE Scientific Focus Area

- Analyzing extreme climate change using CMIP5 simulations
- Investigating the role of human influences of extreme event occurrence
- Quantifying uncertainties of risk ratio of extreme events

Under the Robust Regional Climate Modeling Project

- Investigated change in properties of extreme events within a warmer climate
- Characterized spatial dependence between extremes projections

ACADEMIC EXPERIENCE

University of North Carolina at Chapel Hill

Instructor **Summer 2011 to Fall 2011**
Spring 2010 to Summer 2010

- Taught *Basic Statistics* and *Introduction to Statistics*
- Instructed students on the elements of statistics, data analysis and inferences
- Designed and evaluated assignments and exams

Teaching Assistant **Fall 2007 to Spring 2012**

- T.A. for graduate courses: *Probability, Statistical Theory* and *Applied Statistics*
- T.A. for undergraduate courses: *Basic Statistics* and *Introduction to Statistics*

Statistical and Applied Mathematical Sciences Institute (SAMSI), RTP, NC
Program on Space-time Analysis for Environmental Mapping, Epidemiology and Climate Change

Graduate Fellow **Fall 2009 to Spring 2010**

- Presented a talk in Spatial Extreme session of Climate Change Workshop
- Assisted undergraduates in R and Matlab lab session of Modeling Workshop

Seoul National University, Korea

Instructor **Spring 2006 to Fall 2006**

- Taught courses: *SPSS lab course* and *SAS lab course*
- Trained undergraduate students in SPSS/SAS techniques of data analysis

Publications

S. Jeon, C. Paciorek and M.F. Wehner, Quantile-based Correction and Uncertainty Quantification of Extreme Event Attribution Statements, Submitted.

S. Jeon, Prabhat, S. Byna, W.D. Collins and M.F. Wehner, Characterization of Extreme Precipitation within Atmospheric River Events over California, Submitted.

S. Jeon, W.D. Collins and H. Krishnan, Exploring the Spatial Dependence of Precipitation Extremes in California and Nevada using Downscaled CMIP5 Simulations, Submitted.

S. Jeon and R.L. Smith, Dependence Structure of Spatial Extremes using Threshold Approach. Under revision for resubmission.

D. Cooley, J. Cisewski, R. Erhardt, **S. Jeon**, E. Mannshardt, B. Omolo and Y. Sun, (2012) A Survey of Spatial Extremes: Measuring Spatial Dependence and Modeling Spatial Effects. *REVSTAT Statistical Journal.* 10(1) 135–165.

L.M. Casanova, **S. Jeon**, W.A. Rutala, D.J. Weber and M.D. Sobsey. (2010) Effects of Air Temperature and Relative Humidity on Coronavirus Survival on Surfaces. *Applied and Environmental Microbiology.* 76(9) 2712–2717.

Presentations

S. Jeon, C. Paciorek, and M.F. Wehner, *Scale Mismatch Problem in the Analysis of Central U.S. Temperature Anomaly*, Extreme Value Analysis, Ann Arbor, MI, June, 2015 (Talk)

S. Jeon, C. Paciorek, Prabhat, S. Byna, W.D. Collins and M.F. Wehner, *Uncertainty Quantification for Characterizing Spatial Tail Dependence under Statistical Framework*, American Geophysical Union, San Francisco, CA, December, 2014 (Poster)

S. Jeon, Prabhat, S. Byna, W.D. Collins and M.F. Wehner, *Characterization of Extreme Precipitation under Atmospheric River Events*, Joint Statistical Meeting, Boston, MA, August, 2014 (Talk)

S. Jeon, Prabhat, S. Byna, W.D. Collins and M.F. Wehner, *Modern Statistical Techniques for Characterization of Extreme Precipitation during Atmospheric River Events*, DOE CESD Climate Modeling PI Meeting, Potomac, MD, May, 2014 (Poster)

S. Jeon and W.D. Collins, *Spatial Dependence between Extreme Precipitations in CMIP5*, 12th IMSC, Jeju, Korea, 2013 (Talk)

S. Jeon and R.L. Smith, *Threshold Approach in the Analysis of Spatial Extremes*, Joint Statistical Meetings, San Diego, CA, 2012 (Talk)

S. Jeon and R.L. Smith, *Threshold Approach for the Analysis of North Carolina Temperature Data*, International Conference on Long-Range Dependence, Self-Similarity, and Heavy Tails, RTP, NC, 2012 (Poster)

S. Jeon and R.L. Smith, *Max-stable Processes for Threshold Exceedances in Spatial Extremes*, 7th Conference on Extreme Value Analysis, Lyon, France, 2011 (Talk)

S. Jeon and R.L. Smith, *Threshold Method for Max-stable Processes in Spatial Extremes*, Climate Change Workshop, SAMSI, 2010 (Talk)

Awards

Teaching Award
Excellence in Teaching Award, Department of Statistics and Operations Research, UNC-Chapel Hill, 2011

Review Activity

Reviewer for *Journal of Applied Meteorology and Climatology*, July 2014
Reviewer for *Journal of Hydrometeorology*, March 2014
Reviewer for *Journal of the Korean Statistical Society*, December 2011

Technical Skills

Statistical Software: R, Matlab, SAS, SPSS
Script & Programming: Python, C